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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,653	11/09/2001	Fernando Gonzalez	98095DIV4	8023

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EXAMINER

RICHARDS, N DREW

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 03/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/008,653

Applicant(s)

GONZALEZ ET AL.

Examiner

N. Drew Richards

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17, 19, 29, 30 and 98-128 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17, 19, 29, 30 and 98-128 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 121 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 120. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).
2. Claim 124 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 122. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claim 113 rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the first junction extending beneath the gate and drain, does not reasonably provide enablement for the first junction extending beneath the source. The specification does not enable any person skilled in the art to which it

pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The first junction area shown in the figures does not extend beneath the gate, drain, and source.

5. Claim 118 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the second junction extending beneath the gate and the source, does not reasonably provide enablement for the second junction extending beneath the drain. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The second junction area shown in the figures does not extend beneath the gate, drain, and source.

6. Claim 127 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the first junction extending beneath the gate and the drain and the second junction extending beneath the gate and the source, does not reasonably provide enablement for the first and second junctions each extending beneath the gate, source, and drain. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Neither the first or second junction is shown in the figures to extend beneath the gate, source, and drain.

Claim Rejections - 35 USC § 102

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7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

8. Claims 17, 19, 29, 30, 98-111, 113-116, 118-125, 127 and 128 are rejected under 35 U.S.C. 102(e) as being anticipated by Wu (U.S. Patent No. 5,977,561).

Wu discloses a transistor formed on a substrate 10 in figures 1-7 and on columns 1-8. In figure 7, Wu discloses a gate structure 16,26, a raised drain structure 26, a raised source structure 26, a first junction area 28,30 in the substrate between the gate and the raised drain extending beneath the gate and the raised drain, and a second junction area 28,30 in the substrate between the gate and the raised source extending beneath the gate and the raised source.

With regard to claim 19, the junctions include doped areas.

With regard to claims 98-100, the raised source, raised drain, and gate include doped polysilicon as disclosed on column 4 lines 45-55.

With regard to claims 101 and 102, Wu discloses on column 5 lines 31-35 that a plug can be formed to the source region. The silicide layer 34 would act as an adhesion layer.

With regard to claim 103, the gate includes a gate terminal 26.

With regard to claim 29, Wu discloses a gate structure 16,26, a raised drain structure 26, a raised source structure 26, first means for providing a conductive path between the gate and the raised drain, and second means for providing a conductive path between the gate and the raised source. With regard to claim 30, the first and second means include doped areas 28,30.

With regard to claims 104-106, the raised source, raised drain, and gate include doped polysilicon as disclosed on column 4 lines 45-55.

With regard to claims 107 and 108, Wu discloses on column 5 lines 31-35 that a plug can be formed to the source region. The silicide layer 34 would act as an adhesion layer.

With regard to claim 109, the gate includes a gate terminal 26.

With regard to claims 110, 111 and 114, the first conductive path means includes a first junction and the first junction includes a doped silicon area 28,30. The first junction includes a pocket implant 30 junction.

With regard to claim 113, the first junction 28,30 extends beneath the gate and the drain.

With regard to claims 115, 116 and 119, the second conductive path means includes a second junction and the second junction includes a doped silicon area 28,30. The second junction includes a pocket implant 30 junction.

With regard to claim 118, the second junction 28,30 extends beneath the gate and the source.

With regard to claims 120 and 121, each of the first and second conductive path means includes a junction.

With regard to claim 122-124, a portion of the gate, raised source, and raised drain are substantially coplanar as seen in figure 7.

With regard to claim 125, Wu discloses a gate structure 16,26, a raised drain 26, a raised source 26, a first junction area 28,30 in the substrate between the gate and the raised drain extending beneath the gate and the raised drain, and a second junction area 28,30 in the substrate between the gate and the raised source extending beneath the gate and the raised source wherein the first and second junction areas include doped silicon areas.

With regard to claim 127, Wu discloses a gate structure 16,26, a raised drain 26, a raised source 26, a first junction area 28,30 in the substrate between the gate and the raised drain extending beneath the gate and the raised drain, and a second junction area 28,30 in the substrate between the gate and the raised source extending beneath the gate and the raised source.

With regard to claim 128, Wu discloses a gate structure 16,26, a raised drain 26, a raised source 26, a first junction area 28,30 in the substrate between the gate and the raised drain extending beneath the gate and the raised drain, and a second junction area 28,30 in the substrate between the gate and the raised source extending beneath the gate and the raised source wherein the first and second junction include pocket implant junctions 30.

9. Claims 29, 110-112, 115-117, 125 and 126 rejected under 35 U.S.C. 102(b) as being anticipated by Moravvej-Farshi et al. ("Novel Self-Aligned Polysilicon-Gate MOSFETs with Polysilicon Source and Drain," Solid-State Electronics, Vol. 30, No. 10, 1987, pp. 1053-62).

Moravvej-Farshi et al. disclose in figure 6 a gate structure, a raised drain structure, a raised source structure, first means for providing a conductive path between the gate and the raised drain, and second means for providing a conductive path between the gate and the raised source.

With regard to claims 110-112, the first conductive path means includes a first junction which includes a doped silicon area doped with phosphorous.

With regard to claims 115-117, the second conductive path means includes a second junction which includes a doped silicon area doped with phosphorous.

With regard to claim 125, Moravvej-Farshi et al. disclose a gate structure, a raised drain structure, a raised source structure, a first junction area between the gate and the raised drain extending beneath the gate and the raised drain, and a second junction area between the gate and the raised source extending beneath the gate and the raised source. With regard to claim 126, the doped silicon area includes phosphorous.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Drew Richards whose telephone number is (703)

306-5946. The examiner can normally be reached on M-F 8:00-5:30; Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



NDR
March 11, 2002



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